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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,850	07/18/2003	Willard Charles Raymond	A126.116.102	4768

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/622,850

Applicant(s)

RAYMOND, WILLARD CHARLES

Examiner

James Keenan

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/7/06 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-10, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuke et al in view of Nakamura (both previously of record) and De Anda (US 4,754,867).

Fuke et al show a wafer ring feeding apparatus (a wafer ring being considered structurally equivalent to a "film frame", in that it comprises a wafer sheet or film 2 surrounded by a ring or frame 1), comprising cassette 10 loaded on an elevator 13 (considered to be a "load port", absent any further limitations), robot end effector 58 for grabbing a selected film frame from the cassette or returning a film frame to the cassette, and a vertically adjustable frame support 80 including opposing support arms

85A, 85B each containing plural horizontally adjustable contact elements 86a-A, 86b-B which help guide the film frames in or out of the cassette.

Fuke et al does not show moving the frame support linearly vertically relative to the cassette in the manner set forth. Rather, the cassette moves on an elevator relative to the frame support.

Nakamura shows a similar system for conveying flat circular articles in and out of cassettes, wherein one embodiment (figures 1-3) shows the cassette 8 mounted on a vertically movable support 7 relative to a vertically stationary robot end effector 2, but in figures 4-5, shows another embodiment in which the cassette is stationary while the robot is vertically movable.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified Fuke et al such that the frame support (and robot end effector) was vertically movable relative to a stationary cassette, rather than vice-versa, as Nakamura explicitly discloses this as an alternative equivalent means of performing the same function in the same environment, the use of either of which would work equally well in performing the claimed method.

Fuke et al also does not show the contact elements to be spaced from one another.

De Anda shows an apparatus for feeding flat articles from a stack, including opposing support arms 58 each having plural spaced apart contact elements comprising rollers 130, 132.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have also modified Fuke et al by utilizing spaced apart contact elements, such as the rollers of De Anda, as this would reduce friction on the articles as they are moved in or out of the cassette. Note that De Anda, like Fuke et al, shows the support arms to be horizontally movable relative to the articles for aligning purposes.

Re claim 2, Fuke as modified does not show the frame support to be Y-shaped. Nevertheless, it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus and method of Fuke et al to include this feature, as this would be a simple design expediency which would neither require undue experimentation nor produce unexpected results, and since applicant has not disclosed the feature as solving any particular problem, it appears the invention would work equally well either way.

Re claims 3-4 and 6-7, Fuke et al show that the frame support includes base arm 81 and actuators 87, 88 (also note col. 8, lines 6-15) for horizontally moving the contact elements relative to the base arm.

Re claim 8, the contact elements of De Anda are rollers and would obviously be included when used to modify Fuke et al, as noted above.

Re claim 9, Fuke as modified does not show the rollers to be spring-loaded. Nevertheless, it would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus and method of Fuke et al to include this feature, as this would simply be a design expediency which would neither

require undue experimentation nor produce unexpected results, since applicant has not disclosed that it solves any particular problem.

Re claim 18, the contact elements of Fuke et al are considered to be "vertically compliant", as broadly claimed, by virtue of their connection to air cylinder 92.

4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuke et al in view of Nakamura and De Anda, as applied to claim 10 above, and further in view of Aoki et al (previously of record).

Although Fuke as modified shows the ability to horizontally position the contact elements, this is not done based on the determined diameters of different sized film frames.

Aoki shows that it is well known to horizontally adjust guide rails in response to the determined width of different sizes of lead frames.

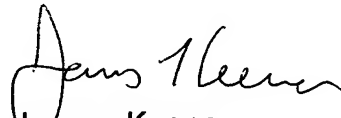
It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the method of Fuke such that the size (diameter) of film frames in the cassette could be determined and the distance between the contact elements adjusted correspondingly thereto, as taught by Aoki, as this would enable the method to be easily performed on film frames of differing sizes and thus provide increased usefulness and flexibility of the system.

5. Applicant's arguments with respect to claims 1-4 and 6-20 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 571-272-6925. The examiner can normally be reached on (schedule varies).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eillen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Keenan
Primary Examiner
Art Unit 3652

jwk
6/15/06